

**Documentation of Environmental Indicator Determination  
RCRA Corrective Action**

**Environmental Indicator (EI) RCRIS code (CA725)**

**Current Human Exposures Under Control**

**Facility Name:** Gold Mills, Inc.  
**Facility Address:** 113 North Tulpehocken St., Pine Grove, PA 17963  
**Facility EPA ID #:** PAD 00 237 7703

1. Has all available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in this EI determination?

\_\_\_YE\_ If yes - check here and continue with #2 below.

\_\_\_\_\_ If no - re-evaluate existing data, or

\_\_\_\_\_ if data are not available skip to #6 and enter "IN" (more information needed) status code.

**BACKGROUND**

**Definition of Environmental Indicators (for the RCRA Corrective Action)**

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

**Definition of "Current Human Exposures Under Control" EI**

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

**Relationship of EI to Final Remedies**

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues.

**Duration / Applicability of EI Determinations**

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

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2. Are groundwater, soil, surface water, sediments, or air, media known or reasonably suspected to be “contaminated”<sup>1</sup> above appropriately protective risk-based “levels” (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

|                             | Yes       | No        | ?   | Rationale / Key Contaminants |
|-----------------------------|-----------|-----------|-----|------------------------------|
| Groundwater                 | <u>YE</u> | ---       | --- | <u>PCE and TCE</u>           |
| Air (indoors) 2             | ---       | <u>NO</u> | --- | -----                        |
| Surface Soil (e.g., <2 ft)  | ---       | <u>NO</u> | --- | -----                        |
| Surface Water               | ---       | <u>NO</u> | --- | -----                        |
| Sediment                    | ---       | <u>NO</u> | --- | -----                        |
| Subsurf. Soil (e.g., >2 ft) | ---       | <u>NO</u> | --- | -----                        |
| Air (outdoors)              | ---       | <u>NO</u> | --- | -----                        |

----- If no (for all media) - skip to #6, and enter “YE,” status code after providing or citing appropriate “levels,” and referencing sufficient supporting documentation demonstrating that these “levels” are not exceeded.

YE If yes (for any media) - continue after identifying key contaminants in each “contaminated” medium, citing appropriate “levels” (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

----- If unknown (for any media) - skip to #6 and enter “IN” status code.

**Rationale and Reference(s):**

- a) bi-Monthly Progress Reports;
- b) RCRA Facility Investigation Report, dated March 3, 1995;
- c) Screening evaluation of indoor air risks, performed by EPA Region III toxicologist Betty Ann Quinn on March 20,2000; and,
- d) Report of private water supply well sampling, January 18,1999.

The facility groundwater contaminated with volatile organic compounds tetrachloroethylene (PCE) and trichloroethylene (TCE), as well as some oil, grease and sodium. The facility is pumping and treated groundwater on site with granular activated carbon filter from 1988. Currently it pumps groundwater from three production wells at an average rate of 200,000 gallons per day. The PCE levels in May of 2001 were 110 to less than 5 ppb, down from 1100 ppb in 1992. During second voluntarily soil clean-up - stabilization in April of 1998 a total of 901.59 tons of contaminated soil was excavated and disposed of on an approved PADEP landfill. During first, 1988, soil clean-up 63,000 tons of contaminated soil were removed. Few of eight private water supply wells located in the vicinity of the facility were sampled in 1992-93 and in December, 1998. EPA has no evidence that the groundwater contamination has moved off-site into private wells. The indoor air concentrations of volatile organic compounds tetrachloroethylene (PCE) and trichloroethylene (TCE) according to references b) and c) are within EPA’s target risk range. The RCRA Facility Investigation (RFI) for the facility is finalized. A Corrective Measure Study (CMS) is a next step. Two steps of final remedy will take place. First step is soil vapor extraction - in-situ remediation technology most appropriate for the site. Second step is a monitored natural attenuation.

**Footnotes:**

<sup>1</sup> “Contamination” and “contaminated” describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based “levels” (for the media, that identify risks within the acceptable risk range).

<sup>2</sup> Recent evidence (from the CO Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above contaminated groundwater than previously believed. While this is a rapidly developing field current evidence (1/99) suggest that indoor air in structures located above (and adjacent to) contaminated groundwater should not be assumed to be acceptable without physical evidence.

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3. Are there complete pathways between “contamination” and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

#### Summary Exposure Pathway Evaluation Table

Potential Human Receptors (Under Current Conditions)

| “Contaminated” Media          | Res.  | Worker | Const. | Tresp. | Recreat. | Food3 |
|-------------------------------|-------|--------|--------|--------|----------|-------|
| Groundwater                   | _NO__ | NO___  | ___    |        |          | ___   |
| Air (indoors)                 | _NO__ | NO___  |        |        |          |       |
| Soil (surface, e.g., <2 ft)   | _NO__ | NO___  | ___    | ___    | ___      | ___   |
| Surface Water                 | _NO__ | NO___  |        | ___    | ___      | ___   |
| Sediment                      | _NO__ | NO___  |        | ___    | ___      | ___   |
| Soil (subsurface e.g., >2 ft) | _NO__ | NO     |        | ___    |          |       |
| Air (outdoors)                | _NO__ | NO___  | ___    | ___    |          |       |

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors’ spaces for Media which are not “contaminated”) as identified in #2 above.
2. enter “yes” or “no” for potential “completeness” under each “Contaminated” Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential “Contaminated” Media - Human Receptor combinations (Pathways) do not have check spaces (“\_\_\_”). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

\_NO\_\_ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter “YE” status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

\_\_\_\_\_ If yes (pathways are complete for any “Contaminated” Media - Human Receptor combination) - continue after providing supporting explanation.

\_\_\_\_\_ If unknown (for any “Contaminated” Media - Human Receptor combination) - skip to #6 and enter “IN” status code

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4. Can the exposures from the complete pathways identified in #3 be reasonably expected to be “significant”<sup>4</sup> (i.e., potentially “unacceptable” because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable “levels” (used to identify the “contamination”); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable “levels”) could result in greater than acceptable risks)?

\_NO\_\_ If no (exposures can not be reasonably expected to be significant (i.e., potentially “unacceptable”) for any complete exposure pathway) - skip to #6 and enter “YE” status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to “contamination” (identified in #3) are not expected to be “significant.”

\_\_\_\_\_ If yes (exposures could be reasonably expected to be “significant” (i.e., potentially “unacceptable”) for any complete exposure pathway) - continue after providing a description (of each potentially “unacceptable” exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to “contamination” (identified in #3) are not expected to be “significant.”

\_\_\_\_\_ If unknown (for any complete pathway) - skip to #6 and enter “IN” status code

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5. Can the “significant” exposures (identified in #4) be shown to be within acceptable limits?

\_YE\_ If yes (all “significant” exposures have been shown to be within acceptable limits) - continue and enter “YE” after summarizing and referencing documentation justifying why all “significant” exposures to “contamination” are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

\_\_\_\_\_ If no (there are current exposures that can be reasonably expected to be “unacceptable”)- continue and enter “NO” status code after providing a description each potentially “unacceptable” exposure.

\_\_\_\_\_ If unknown (for any potentially “unacceptable” exposure) - continue and enter “IN” status code

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6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

\_\_\_\_ NO - "Current Human Exposures" are NOT "Under Control."

Supervisor (signature) \_\_\_\_\_ Date 01-02-02  
 (print) Gotthold, Paul  
 (title) PA. Operations Branch Chief  
 (EPA Region or State) EPA, Region 3

1650 Arch Street, 3WC22  
RCRA Facility Investigation Report, March 1995;  
EPA files.

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